

We claim:

1. A linear recording medium, for use with a recording drive designed to read parallel servo transitions having a substantially non-zero azimuth angle, and no modulation of distance between immediately adjacent parallel servo transitions on the medium, comprising a series of parallel servo transitions at a zero azimuth angle.
2. The medium of claim 1, further comprising modulated distances between adjacent parallel servo transitions as a function of location of the transitions on the medium.
- 10 3. The medium of claim 1, in which the linear recording medium is a magnetic recording medium.
4. The medium of claim 1, in which the linear recording medium is a tape recording medium.
- 15 5. The medium of claim 1, in which the second series has a roughened gap edge profile.
6. The medium of claim 5, in which the roughened gap edge profile has peak-to-peak roughening amplitude, A , equal to $\left(\frac{T_w}{2}\right)\tan\theta$, where θ is a slant angle and the profile has a cross track wavelength λ approximately equal to a servo read head track width T_w .

7. A system for intentionally generating position error signal in a data recording drive designed to read only servo transitions having a substantially non-zero azimuth angle and no modulation of distance between immediately adjacent parallel servo transitions on the medium, comprising in combination:
- 5 a) parallel servo transitions at a zero azimuth angle; and
- b) a servo read head connected to the drive.
8. The system of claim 7, in which the medium further comprises modulated distances between adjacent parallel servo transitions as a function of location of the transitions on the medium.
- 10 9. The system of claim 7, in which the parallel servo transitions at a zero azimuth angle have a roughened gap edge profile.
10. The system of claim 9, in which the roughened gap edge profile has peak-to-peak roughening amplitude, A, equal to $\left(\frac{T_w}{2}\right)\tan\theta$, where θ is a slant angle and the profile has a cross track wavelength λ approximately equal to a servo read head track width T_w .
- 15 11. A method of evaluating performance of a linear recording drive designed to read servo transitions having a substantially non-zero azimuth angle without modulation of distance between immediately adjacent parallel servo transitions on a linear recording medium compatible with the drive, comprising
- 20 a) providing a linear recording medium, upon at least a portion of which are:
- (i) first parallel servo transitions at a non-zero azimuth angle; and

- (ii) second parallel servo transitions at a zero azimuth angle;
and
- 5 b) using the drive to read position error signal from the first
parallel servo transitions at each transverse location on the
medium;
- 10 c) comparing the position error signal to an expected value;
d) using the drive to read system noise from the second parallel
servo transitions; and
- 15 e) comparing the system noise to an expected value.
12. The method of claim 11, in which the second parallel servo transitions at a zero azimuth angle have a roughened gap edge profile.
13. The method of claim 12, in which the roughened gap edge profile has peak-to-peak roughening amplitude, A, equal to $\left(\frac{T_w}{2}\right)\tan\theta$, where θ is a slant angle and the profile has a cross track wavelength λ approximately equal to a servo read head track width T_w .